

## Notes on the Genus *Aerogrammus* GAHAN, with Description of a New Species (Coleoptera, Cerambycidae, Prioninae)

(Revisional Studies of the Genus *Megopis* sensu LAMEERE, 1909 – 4)

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**Abstract** The genus *Aerogrammus* is revived as a full genus and a small but important emendation is given to the original description. A new species is described under the name *A. hefferni* from West Sumatra.

The genus *Aerogrammus* was described by BATES (1975) for a single species, *rufus*. LAMEERE (1909) regarded this species as a junior synonym of *procera* PASCOE (1866) but he considered the genus *Aerogrammus* valid. Later, LAMEERE (1919) downgraded it to a subgenus of the genus *Megopis* though he noted its peculiarity. Therefore, *Aerogrammus* has been regarded as a peculiar but simple subgenus containing only one species. However, two important facts were revealed recently. One is that the male of this genus has a hair fringe on the underside of the antennae. In the key tables to *Megopis* given by LAMEERE (1909, 1919), *Aerogrammus* is not led down to the appropriate place, because this peculiarity leads the beetle, through the first key, to the subgenus *Baralipion*. The other is that two examples representing the second species of this subgenus were brought about from West Sumatra. In this paper, I am proposing to give *Aerogrammus* a generic status again after introducing a new member from West Sumatra under the name *Aerogrammus hefferni* sp. nov.

The abbreviations used in this paper and in this series are as follows: NSMT: National Science Museum (Nat. Hist.), Tokyo; IRSNB: Institut Royal des Sciences Naturelles de Belgique; NHML: The Natural History Museum, London. Measurement of body parts: BL – body length, HL – length of head, HW – width of head across eyes, PL – length of pronotum, PW – maximum width of pronotum, PA – apical width of pronotum, PB – basal width of pronotum, EL – length of elytra, EW – maximum width of elytra, AL – length of antennae, Al<sub>n</sub> – length of (n)th antennal segment.

Before going further, I would like to express my sincere gratitude to Dr. Shun-Ichi UÉNO of NSMT for kindly reading the original manuscript and giving appropriate suggestions. I am grateful to Mrs. Sharon SHUTE of NHML and Mr. Alain DRUMONT of IRSNB for their kind help in re-examining type specimens. In this study I also owe to Mr. Daniel J. HEFFERN of Texas, USA for proposing the most important example of this study.

Genus *Aerogrammus* BATES

(Figs. 1–3)

*Megopis* PASCOE, 1866, Proc. zool. Soc. London, **1866**: 536 [nec. SERVILE, *pro part.*].*Aerogrammus* BATES, 1875, Entomologist's mon. Mag., **12**: 50.*Megopis* subg. *Aerogrammus*: LAMEERE, 1919, Annls. Soc. ent. Belg., **53**: 169.Type species: *Aerogrammus rufus* BATES, 1875.

*Generic features.* Body elongated cylindrical, length 26–40 mm, integument tea-red and sometimes darker, costae often ochreous, elytra glabrous and deeply punctured, other parts more or less pubescent.

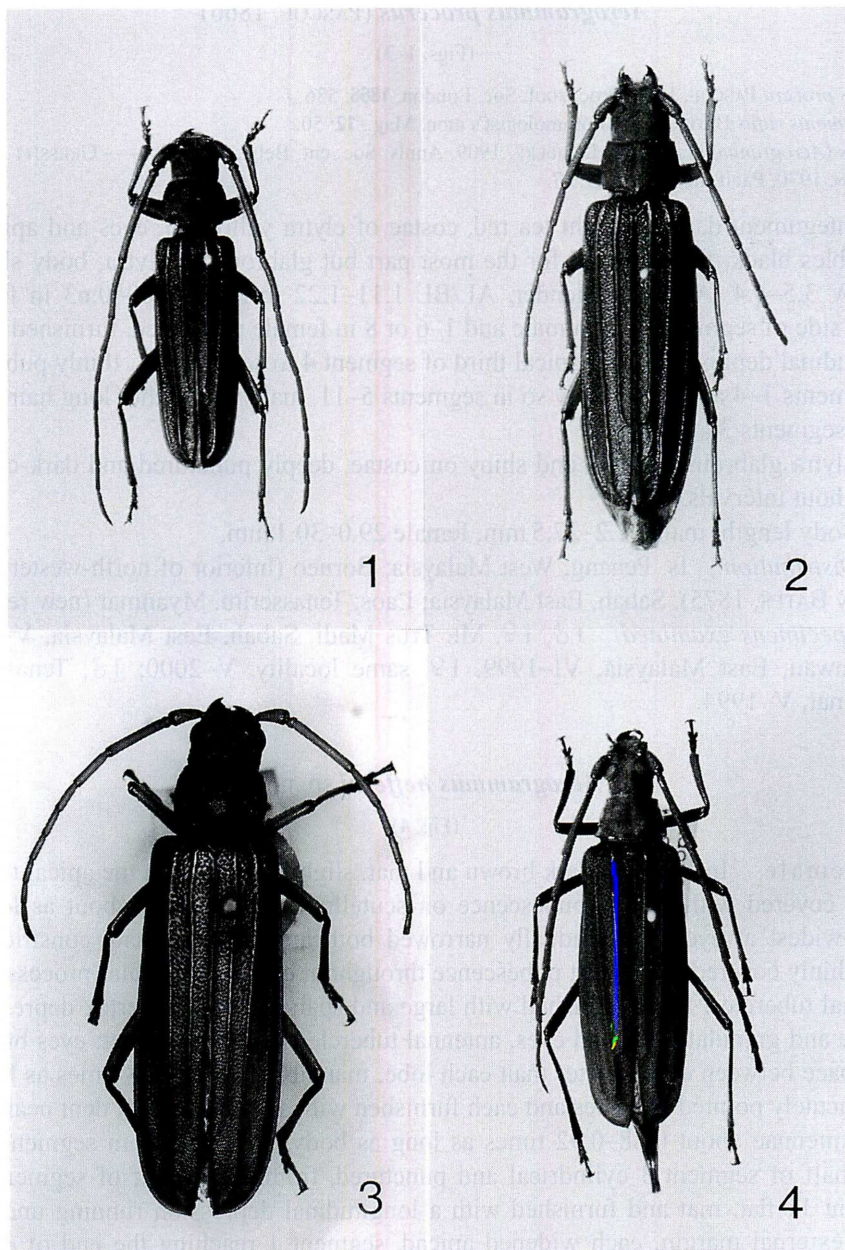
Head cylindrical, slightly shorter than wide, uniformly covered with short pubescence; antennal tubercle very weakly raised; mandibles short, each acutely pointed and furnished with an inner dent; eyes bulging but upper eyelobes rather small in dorsal view, interspace between eyes once to twice as long as each eyelobe. Antennae long and slender, cylindrical at segments 1–3 or 4, flat and furnished with shallow longitudinal depression running underside of external margin of segments 3 or 4 to 10 or 11, subglabrous for the most part and furnished with long hair fringe under segments 3–4 in male, AL/BL 1.17–1.21 in male, 0.52–0.93 in female, Al 3 about as long as or slightly shorter than Al 4+5, segments 3–10 gradually decreasing in length, segment 11 as long as segment 8.

Pronotum short, PL/HL 0.71–0.92, PL/PW 0.53–0.64, uniformly covered with thin pubescence, furnished with a longitudinal depression at about middle, lateral margins edged but not distinctly, each side moderately rounded, widest at the basal quarter; basal and apical angles usually without distinct angles but in *A. hefferni* sp. nov. furnished with small projections. Scutellum linguiform, concave at the middle part and glabrous or pubescent.

Elytra glabrous, uniformly covered with small but deep punctures except on the costae, slender, EL/EW 2.7–2.9 in male, 2.5–2.7 in female, almost parallel-sided at basal four-fifths and narrowly rounded at apex, furnished with small but distinct sutural teeth; each elytron provided with two distinct costae, the first one starting from humerus, running about three-fourths of elytron and disappearing or turning inwards and meeting sutural margin, sometimes having a branch which extends outward and meeting the second costa, the second one starting from humerus, running almost parallel to the first and disappearing just before the apex, each also with a feeble and short third costa close to external margin.

Ventral surface smooth, thinly and sparsely covered with rather long hairs for the most part; metepisterna widest at anterior fourth, gradually straightly narrowed posteriorly and then more strongly narrowed from posterior fourth to acutely pointed apex. Legs smooth and slender, very thinly haired throughout except inside of male tibiae which are furnished with moderately long hairs; tibia slightly depressed laterally; tarsi short, segments 2 and 3 wider than long, segment 3 deeply bilobed, claws as long as or slightly shorter than combined length of segments 1–3.





Figs. 1–4. — 1–3. *Aerogrammus procerus* (PASCOE, 1866); 1, male from Sabah, East Malaysia; 2, female from the same place; 3, female from Is. Penang, West Malaysia, the holotype of *Megopis procerus* PASCOE, 1866, preserved in NHML. — 4. *A. hefferni* sp. nov., holotype female, from West Sumatra, Indonesia.

*Aerogrammus procerus* (PASCOE, 1866)

(Figs. 1–3)

*Megopis procera* PASCOE, 1866, Proc. zool. Soc. London, **1866**: 536.*Aerogrammus rufus* BATES, 1875, Entomologist's mon. Mag., **12**: 50.*Megopis (Aerogrammus) procera*: LAMEERE, 1909, Annls. Soc. ent. Belg., **53**: 169. — GRESSITT & RONDON, 1970, Pacif. Ins. Mon., **24**: 17.

Integument dark or bright tea red, costae of elytra yellowish, eyes and apices of mandibles black, thinly haired for the most part but glabrous on elytra; body slender, BL/EW 3.5–4.4. Antennae slender, AL/BL 1.11–1.22 in male, 0.60–0.63 in female, dorsal side of segments 1–4 in male and 1–6 or 8 in female punctured, furnished with a longitudinal depression from apical third of segment 4 to segment 11, thinly pubescent in segments 1–4 and very thinly so in segments 5–11, male with rather long hair fringe under segments 3 and 4.

Elytra glabrous, smooth and shiny on costae, deeply punctured and dark-colored throughout intervals.

Body length: male 21.2–27.5 mm, female 29.0–30.1 mm.

*Distribution.* Is. Penang, West Malaysia; Borneo (interior of north-western Borneo, by BATES, 1875), Sabah, East Malaysia; Laos; Tenasserim, Myanmar (new record).

*Specimens examined.* 1♂, 1♀, Mt. Trus Madi, Sabah, East Malaysia, V–1997; 1♂, Tawau, East Malaysia, VI–1999, 1♀, same locality, V–2000; 1♂, Tenasserim, Myanmar, V–1994.

*Aerogrammus hefferni* sp. nov.

(Fig. 4)

Female. Integument dark brown and mat, slightly reddish on the apical third of elytra, covered with yellow pubescence on scutellum. Head small, about as long as wide, widest at eyes and gradually narrowed both apicad and basad, constricted at base, thinly covered with short pubescence throughout except on jugular processes and antennal tubercles; frons furnished with large and sparse granules; vertex depressed at middle and granulated around eyes, antennal tubercle small but distinct; eyes bulging, interspace between eyes shorter than each lobe; mandibles about 0.18 times as long as head, acutely pointed at apices and each furnished with a small internal dent near base.

Antennae about 0.88–0.92 times as long as body, glabrous, from segments 1 to basal half of segment 3 cylindrical and punctured, from apical half of segment 3 to segment 11 flat, mat and furnished with a longitudinal depression running underside along external margin, each widened apicad, segment 1 reaching the end of eyes at apex, segment 3 about 3.1 times as long as segment 1, segment 4 about 1.7 times of segment 1, remainders gradually decreasing in length to segment 10, segments 4–10 each widened apicad, segment 11 as long as segment 8.

Pronotum about 0.9 times as long as head, PL/PW 0.62–0.64, widest at basal



angle and almost straightly narrowed to apical angle which is not strongly but obviously projected at side and constricted just before apex, lateral margin distinctly edged in basal half and only traceable by line in apical half, disc thinly pubescent throughout and shallowly depressed at about middle. Scutellum linguiform, thickly covered with yellow pubescence.

Elytra slender, EL/EW 2.56–2.72, widest at about middle and slightly narrowed both anteriad and posteriad, smoothly rounded near apex and ending with small sutural dent, glabrous throughout, strongly deeply punctured for the most part except on a part of costae; each elytron furnished with four costae, first strongly raised, starting from humeri and meeting the second at about apical fifth of elytron; second weaker than the first, starting from humeri and after meeting the first, meeting the third close to the apex and then becoming vestigial and hardly traced to meet sutural margin.

Ventral surface generally covered with rather long and white pubescence; abdominal sternite 5 strongly emarginate so as to be divided into two lobes on each side and a robust ovipositor projected from that part.

Legs smooth, slender and long, metatibiae slightly arcuate and depressed laterally, tarsi short, claws shorter than united length of three tarsal segments.

Body length: 26.5–27.9 mm

Male unknown.

*Type series.* Holotype: ♀, Harau Valley, West Sumatra, IV–1996, deposited in coll. NSMT. Paratype: 1 ♀, same locality, V–1994, in my coll.

*Notes.* This species is supposed to be very close to *A. procerus* (PASCOE) but appears conspicuously different from the latter in having wider and darker body, longer and flatter antennae, very weak granules of head and pronotum, distinctly narrowed and angled apical end of pronotum, entirely pubescent scutellum and slender and longer legs.

*Etymology.* The new specific name is given after Mr. Daniel J. HEFFERN of Texas, USA, who has been investigating the Cerambycidae of the Sunda Islands for many years.

### Discussion on the Relationships of *Aerogrammus* and Known Genera

A series of peculiar characteristics possessed by this genus were noticed by BATES (1875) and LAMEERE (1909), for example, thick posterior part of head, narrow upper eye-lobes and not angled basal margin of pronotum, etc. LAMEERE (1909) wrote “ne me paraît pouvoir être rattaché à aucune forme de *Megopsis*” to explain them. *Aerogrammus hefferi* sp. nov. does not have most of these characters and consequently, they are proved not to be the generic characters but the specific characters of *A. procerus*. Then, there might arise two questions, one of which:— is this new species really a member of *Aerogrammus*? Both the two species have a shallow and longitudinal depression running underside along the external margin of antennae and the elytra deeply punctured and entirely glabrous, and these character states are almost limited to these

two species throughout the tribe they belong to. In addition to these characters, they are almost same-sized and possess very short mandibles, similar scutellum, elytral costa, etc., and I cannot help regarding them as belonging to the same genus. The other question is: — is it necessary to regard *Aerogrammus* as an independent genus after most of important characters have been proved not generic but only specific to *A. procerus*? As the matter of fact, this genus has elongated body and slender antennae which are similar to those of some species of *Aegolipton* GRESSITT. In order to answer the latter question, I have to emphasize the importance of the mentioned character states of the antennae and elytra, especially the latter. The deep punctures of the elytra have never been found throughout the subgenera *Nepiodes*, *Baralipton* and *Aegosoma* sensu LAMEERE (1909). It can be found only in *Palaeomegopsis* BOPPE or *Rhineimegopsis* KOMIYA et DRUMONT though not so distinctly as in this genus. Other than this, *Aerogrammus* has a series of analogy such as body shape, short mandibles, hairs on under-side of male antennae, simple and rather short segment 3, etc. to *Rhineimegopsis*, especially to *R. sabahensis* (HÜDEPOHL). This fact suggests that this genus is related to *Rhineimegopsis* (and perhaps to *Palaeomegopsis*) and is rather distant from *Aegolipton* notwithstanding its superficial resemblance to the latter.

## 要 約

小宮次郎：*Aerogrammus* 属の再検討。—— *Aerogrammus* は従来、ただ1種 *procerus* を含む *Megopsis* 属の亜属とされてきた。近年得られた材料を検討の結果、この種の雄触角3, 4節下縁は長毛の縁取りをもつ。この特徴は、LAMEERE (1909, 1919) の検索表によれば本属のものではないことになっていたため、これを使用するとこの属(種)は誤同定され、*Baralipton* 属とされる恐れがあった。さらに近年スマトラより本属の1新種が発見され、*A. hefferni* sp. nov. として記載した。ところがこの新種は、従来 *Aerogrammus* 亜属の顕著な特徴とされた前胸背板の前後角がともに円いなどの特徴をもたない。しかし、鞘翅が強い点刻で覆われ無毛である、触角下面外側に浅い縦の溝があるなどの特徴を *procerus* と共有し、かつこれらの特徴は近似種間ではきわめて特異である。このことは *Aerogrammus* が、一見 *Aegolipton* GRESSITT などに似ているにもかかわらず、それとは遠く、むしろこれらの点で類似している *Rhineimegopsis* KOMIYA et DRUMONT などに近い特殊なグループであることを示唆しているので、BATES の当初の記載どおり、独立属とすることを提案する。また、以上にともない、属の特徴を修正する。

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## New Host Records of Cerambycid Beetles (Coleoptera, Cerambycidae) from Okinawa Prefecture, Part 1

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Based on emergence from many wood species gathered by the author in Okinawa Prefecture, new host-plant records for cerambycid species are given. These timbers and felled trees were collected by the author from Okinawa Is. on March 7, 2002, and from Okinawa Is. and Ishigaki Is. from February 27 to March 6, 2003. The wood of *Styrax japonica* SIEB. et ZUCC., gathered in 2002, were put into the cage set outdoors, and other material obtained in 2003 into the homoiothermal laboratory (25°C) at Tsukuba. In the first part of this report, I will record nine cerambycid species belonging to the subfamilies Lepturinae and Cerambycinae.

The author wishes to express his sincere thanks to H. IREI, researcher, T. MIYAGI, Chief of the Laboratory, M. GUSHIKEN, Sub-Director, and M. NEMA, Director, of the Okinawa Prefectural Forest Institute for their kind support and help in the field.

### 1. *Mimotrangalia longicornis* (GRESSITT)

*Specimens examined.* 1♂, 1♀, Mt. Nagodake, Okinawa Is., *Viburnum awabuki* K. KOCH (Caprifoliaceae), 27–II–2003 coll., 18–VI–2003 emer.

### 2. *Ephies japonicus okinawanus* HAYASHI

*Specimen examined.* 1♀, Mt. Nagodake, *Viburnum awabuki*, 27–II–2003 coll., 19–VI–2003 emer.

### 3. *Nortia carinicollis* SCHWARZER

*Specimens examined.* 3♂♂, 2♀♀, Mt. Fukai-Omotodake, Ishigaki Is., *Machilus japonica* SIEB. et ZUCC. (Lauraceae), 4–III–2003 coll., 22–IV–20–V–2003 emer.